REMARKS/ARGUMENTS

Claims 21, 54, 55, 60-77 were pending in the present application, with claims 21, 60, 61, and 76 being independent.

The Examiner rejected Claims 21, 54, 61-64, 66-69 and 71-73 under 35 U.S.C. §102(b) as being anticipated by US Patent No. 5,980,736 ("Putz"). Further, the Examiner states "it is unclear what structure the applicant is reciting when claiming the sensor array is a meteorological station," however, the Examiner nonetheless has deemed the structure of the sensor array of claims 74-75 the equivalent of that of Putz, and rejects those claims, apparently under 35 U.S.C. §102(b).

The Examiner has also rejected Claim 60 under 35 U.S.C. §103(a) as being unpatentable under Putz, in view of unstated well known prior art. The Examiner has rejected Claims 55, 70, 76, and 77 under 35 U.S.C. §103(a) as being unpatentable under Putz, in view of U.S. Patent No. 4,659,459 ("O'Leary"). The Examiner has rejected Claims 65 under 35 U.S.C. §103(a) as being unpatentable under Putz, in view of U.S. Publication No. 2003/0030011 ("Brown").

Applicant has herein amended claims 21, 60, 61, 63, 65-72, and 76, and adds new independent claim 78. Applicant files this response concurrent with a Request for Continuing Examination, and Request for an Interview. For at least the reasons and amendments stated herein Applicant requests a Notice of Allowance for the application.

Request for Continuing Examination

This Amendment and Response is being filed with a Request for Continuing Examination (RCE).

Claim Rejections under 35 U.S.C. §102(b)

The Examiner has rejected Claims 21, 54, 61-64, 66-69 and 71-73 under 35 U.S.C. §102(b) as being anticipated by US Patent No. 5,980,736 ("Putz"). Further, the Examiner has deemed the structure of the sensor array of claims 74-75 the equivalent of that of Putz, and rejects those claims, apparently under 35 U.S.C. §102(b).

Applicant traverses the rejections under §102(b) on the basis that Putz does not teach, suggest or describe an *in-line system* for a disinfecting chemical dispenser located *in-line to a storm water management infrastructure*. Applicants have amended their claims to more particularly point out their invention. Support for the claim amendments can be found in at least Figure 2, Figure 3, Paragraph 35, 36 and 37, as well as other parts of the application.

The invention of the present application differs from the system of Putz in at least the following respects: Putz appears to require that the storm water input to the system be contained, and in its preferred embodiment requires three containers for the storm water. (Col. 3, lines 19-23, "Even though the apparatus for processing rain water and/or surface water can consist basically of only one container or more than two containers, two or three containers are used in the following preferred exemplary embodiments."; Col. 4, lines 40-44, "A processing arrangement for treating the water to be processed consists basically of storage containers which, for example, can be installed under the first container…").

Further, Putz does not alter the amount of disinfectant based on flow rate through a storm water management infrastructure as determined by water pollution characteristics as determined by a water pollutions sensor and a means to measure water flow rate, because the invention of Putz stores the water to be treated in a container, and determines treatment based on the type, location, amount, use and storage time of the water in the container. (See e.g., Col. 5, lines 55-65, "the circulation can be switched off since the water contained in the lowest section 14 does not require processing or treatment. It becomes contaminated only after it has been standing for several days (such as, for example, during vacation time). It is possible to activate the circulation automatically for a short period of time under conditions of "zero consumption of industrial water" and to undertake a water treatment in the lowest section 14 of the first container after a certain time or completely eliminate the same.") This is significantly different from Applicant's invention, which disinfects water runoff in wet and dry weather when installed in-line in a storm water management infrastructure. Unlike Putz, Applicant's invention does not require a supply of industrial drinking water (Col. 5, line 13), three containers (col. 3, lines 19-23), or pumps to prevent backflow (Col. 4, line 49). In fact, when rain/surface water is processed by the invention of Putz, it remains untreated for "garden use" (Col. 7, line 55-56).

Regarding the meteorological sensor array of dependent claims 74 and 75, Examiner

cites the equivalent sensor in Putz. Applicant notes that the only sensors described in Putz are pressure sensor 17 and overflow sensor 37, and neither of these sensors are equivalent to the meteorological sensor array discussed in the specification of the Application at least at paragraph [036], because Applicant's invention measures storm water flow rate, unlike Putz. Input from a meteorological sensor array regarding, for example, the amount of rainfall received in a storm, could be used independently by the control unit to determine the preferred by-pass configuration of the invention in real-time, for example.

Claim Rejections under 35 U.S.C. § 103(a)

The Examiner has also rejected Claim 60 under 35 U.S.C. §103(a) as being unpatentable under Putz, in view of unstated well known prior art. The Examiner has rejected Claims 55, 70, 76, and 77 under 35 U.S.C. §103(a) as being unpatentable under Putz, in view of U.S. Patent No. 4,659,459 ("O'Leary"). The Examiner has rejected Claims 65 under 35 U.S.C. §103(a) as being unpatentable under Putz, in view of U.S. Publication No. 2003/0030011 ("Brown"). Distinctions over Putz have been made above.

Regarding O'Leary, the invention of O'Leary measures the velocity of the chemicals being introduced to the water being treated to know the amount of chemicals to continue to add to the water, as in a traditional water tower system. (Col. 3, lines 25-27). The present invention instead measures the flow rate of storm water runoff through a storm water management infrastructure.

Regarding Brown, while Brown teaches use of light to disinfect generally, Brown does not teach use of a UV source; and wherein said at least one sensor is a UV spectrometer interfaced to the storm water runoff via a fiber optic cable in the system of the present invention.

Summary

Applicant further respectfully submits that Putz, neither alone nor in combination with O'Leary and other prior art of record teaches, suggests or discloses a wet and dry weather water disinfection system for reducing harmful pathogens in water runoff comprising: a storm water management infrastructure comprising a storm sewer comprising an inlet to accept water runoff and flowingly coupled to a receiving body of water; a disinfecting chemical dispenser located

in-line to the storm water management infrastructure where the disinfecting chemical dispenser is configured to add a disinfectant chemical into water flowing through the storm water management infrastructure, the disinfectant chemical capable of reducing harmful pathogens in the water; a sensor configured to measure water pollution characteristics attributable to the water flowing through the storm water management infrastructure; a means to measure water flow rate attributable to the water flowing through the storm water management infrastructure; and a control unit that controls an amount of the disinfectant chemical added to the water flowing through the storm water management infrastructure based on the flow rate through the storm water management infrastructure as determined by the flow rate measurement means.

Applicant further respectfully submits that Putz, neither alone nor in combination with O'Leary and other prior art of record teaches, suggests or discloses a method for water disinfection, comprising the steps of: placing a portable disinfecting chemical dispenser adjacent to a storm drain inlet, the disinfecting chemical dispenser configured to add a disinfection chemical into water flowing through the storm drain collection location, the disinfection chemical capable of reducing harmful pathogens in the water; measuring flow rate attributable to the water flowing through the storm drain inlet using at least one measuring means; determining an amount of disinfection chemical to add to the water flowing through the storm drain inlet based on the flow rate by a controller connected to the portable disinfecting chemical dispenser; and adding the determined amount of the disinfection chemical from the portable disinfecting chemical dispenser to the water flowing through the storm drain.

Applicant further respectfully submits that Putz, neither alone nor in combination with O'Leary and other prior art of record teaches, suggests or discloses An automated in-line storm water disinfection system for reducing harmful pathogens in wet and dry weather water runoff comprising: a monitor for measuring flow rate of water runoff through a storm water management infrastructure, whereby the flow rate can be measured for both wet and dry weather storm water runoff; a means for disinfecting the water runoff; a control unit located in-line to the storm water management infrastructure and electrically coupled to the flow rate monitor and the disinfecting means, and capable of causing the disinfecting means to dispense disinfectant into the water runoff in a dosage adjusted for the measured flow rate, for purposes of reducing harmful pathogens in the water runoff; and at least one sensor coupled to the control unit for

measuring water pollution characteristics attributable to the water runoff.

Applicant further respectfully submits that Putz, neither alone nor in combination with O'Leary and other prior art of record teaches, suggests or discloses An automated in-line wet and dry weather water flow disinfection system for disinfecting storm water runoff comprising: an in-line flow rate monitor for measuring flow rate of water runoff through a storm water management infrastructure; a chemical dispenser for dispensing at least one disinfectant chemical into the water runoff; a control unit located in-line to the storm water management infrastructure and electrically coupled to the flow rate monitor, the control unit further coupled to the chemical dispenser and capable of controlling the amount of the chemical disinfectant applied to the water runoff; the control unit further capable of automatically determining a dosage level of the chemical disinfectant based on the flow rate; at least one upstream sensor coupled to the control unit to provide feedback to the control unit regarding pre-treatment biological properties of the water runoff; and at least one downstream sensor coupled to the control unit to provide feedback to the control unit as to post-treatment biological properties of the disinfected water runoff.

Applicant further respectfully submits that Putz, neither alone nor in combination with O'Leary and other prior art of record teaches, suggests or discloses A wet and dry weather water disinfection system for reducing harmful pathogens in urban water runoff comprising: a storm water management infrastructure comprising an urban street storm sewer comprising an inlet to accept water runoff and flowingly coupled to a receiving body of water; a disinfecting chemical dispenser located in-line to the storm water management infrastructure, where the disinfecting chemical dispenser is configured to add a disinfectant chemical into the urban water runoff flowing through the storm water management infrastructure, the disinfectant chemical capable of reducing harmful pathogens in the urban water runoff; a sensor to measure urban water runoff flow rate attributable to the urban water runoff flowing through the storm water management infrastructure; and a control unit that controls an amount of the disinfectant chemical added to the urban water runoff flowing through the storm water management infrastructure based on the flow rate through the storm water management infrastructure as determined by the flow rate measurement means.

Claims 54, 55, 62 - 75, and 77 depend from and are further limitations of amended

independent Claims 21, 60, 61 and 76, and are therefore allowable over the cited prior art for at least the reasons stated above.

Conclusion

Claims 21, 54, 55, 60-78 are now pending in the present applicant. Claims 21, 60, 61 76 and 78 are independent claims. Applicant asserts that the claims as presented herein are patentable over the cited prior art for at least the reasons stated herein and are therefore in condition for allowance. Applicant respectfully requests a timely Notice of Allowance for the claims in this case.

Respectfully submitted,

DALINA LAW GROUP, P.C.

By_____

Cynthia A. Casby
Reg. No. 47,475
Tel.: 626-405-2413